



**VILLAGE COUNCIL MEETING
WORKSHOP AGENDA**
MEETING TO BE HELD VIA ZOOM TELECONFERENCE
And in Person for Councilors and Commissioners
At 38 Ocean Boulevard
View Zoom information on www.vtsv.org
TAOS SKI VALLEY, NEW MEXICO
TUESDAY, AUGUST 15, 2023 2:00 P.M.

- I. 2:00 PM CALL TO ORDER AND INTRODUCTION
- II. ROLL CALL
- III. APPROVAL OF THE AGENDA
- IV. WORKSHOP

A. Village of Taos Ski Valley Items

Introduction of how VTSV and TC can work together to address common issues. Build a process for meeting on a regular basis, communication, and professional relationships. Present the information and gather Q&A, TOUR@3pm

Challenge Environment, **FEMA Info**; Fire Wildland fire score Insurance, Land Slide/avalanche, runoff biggest risk NOW Wind and Water

Water and Wastewater facilities WIP **Anthony** and show Point Man Rob W. Invite for tour.

JPA for NCRTD, LFB Goals to reduce Methane, Dispatch, ECCOG, Firefighting, etc.

MOU for FEMA ready; Blow Down, Fire NFL/Taos Valley projects NM150 thinning, DOT projects- Trails, -Public Safety, Water outage, underground electric, gas, etc.

MOU where our Staff can support operations of each other, technical help, Building Official/Zoning, Fiscal Agent, etc.

LEPC

B. 2:30 PM Taos County Items

C. Q & A

- V. 3:00 PM ADJOURNMENT
- VI. 3:00 PM-5:00 PM TOUR OF VILLAGE WASTEWATER TREATMENT PLANT AND WATER FACILITIES

-- Providing infrastructure & services to a World Class Ski Resort Community --



**VILLAGE COUNCIL WORKSHOP
HELD IN CONJUNCTION WITH TAOS COUNTY
COMMISSION
MINUTES**

**MEETING TO BE HELD VIA ZOOM TELECONFERENCE
And in Person for Councilors and Commissioners**

At 38 Ocean Boulevard

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TAOS SKI VALLEY, NEW MEXICO

TUESDAY, AUGUST 15, 2023 2:00 P.M.

I. 2:00 PM CALL TO ORDER AND INTRODUCTION:

The Village Council Meeting workshop was called to order by Mayor Pro Tem Tom Wittman at 2:00 p.m. Notice of the meeting was properly posted.

II. ROLL CALL:

Ann Wooldridge, Village Clerk, called the role and a quorum was present.

Governing Body Present:

Councilor Henry Caldwell

Councilor Brent Knox

Councilor Tom Wittman, Mayor Pro Tem

Not Present:

Councilor Chris Stagg

III. APPROVAL OF THE AGENDA

MOTION: To approve the agenda as written

MOTION: Councilor Knox **SECOND:** Councilor Caldwell **PASSED: 3-0**

IV. WORKSHOP

A. Village of Taos Ski Valley Items

Discussion took place between the Village Council members and Taos County Commissioners concerning methods of working together to address common issues, building a process for meeting together on a regular basis, and improving communication and professional relationships.

Areas of interest appear to focus generally on Village water and wastewater operations, law enforcement and public safety operations, and the possible sharing of resources for things such as building inspections and emergency equipment and labor.

V. 3:00 PM ADJOURNMENT

MOTION: To Adjourn

MOTION: Councilor Knox **SECOND:** Councilor Caldwell **PASSED: 3-0**

VI. 3:00 PM-5:00 PM TOUR OF VILLAGE WASTEWATER TREATMENT PLANT AND WATER FACILITIES

Mayor Pro Tem Tom Wittman

ATTEST:

Village Clerk, Ann Marie Wooldridge

-- Providing infrastructure & services to a World Class Ski Resort Community --

Water System Name:

Village of Taos Ski Valley

PWS # NM35-333-29

Regulatory Agency and Regulations

New Mexico Environment Department (NMED) is an executive agency of the State of New Mexico. NMED through its Drinking Water Bureau (DWB) was delegated Safe Drinking Water Act (SDWA) primacy in 1978 from the US EPA. This delegation gives the NMED the authority to regulate the state drinking water regulations and National Primary Drinking Water Regulations (NPDWR) at Public Water Systems.

Our NMED-DWB Compliance Officer is:

Name: Wayne Jeffs

Title: Compliance Officer

Organization: NMED-DWB; <http://www.env.nm.gov>

Office/Cell #: (505) 476-8612

Toll-Free Phone #:

Fax #: (505)476-8656

Email Address: wayne.jeffs@state.nm.us

Mailing Address: PO Box 5469, Santa Fe, NM 87502-5469

General System Description

The Village of Taos Ski Valley is located at the southernmost part of the Sangra de Cristo mountain range owned and operated by the municipality and serves 190 connections through 212 meters. There are approximately 22 commercial meters and 190 residential meters. We have a residential population of 69 full time residents based on recent census but our average annual population can average 100- 1000 visitors per day during the summer months and between 1000-5000 visitors per day through the winter ski season through the months of Nov-Dec. Flow demands range between and average daily flow of 110 gpm and peak flows around 150 gpm.

Water is supplied to the system by a subsurface spring developed in 1992 that provides groundwater quality drinking water ranging from 90-120 gpm during low flow period of winter and as high as 1000-1500 gpm during peak flow in early summer. The spring was designed and developed in 1992 with a stainless-steel screen manifold, capped with a bentonite clay seal and 6" ductile iron pipe to collect and distribute water to a chlorination station for disinfection. A 15% sodium hypochlorite solution is fed into the distribution line before the contact chamber and chlorine residual is checked daily. Chlorine is measured at the source and the last point in the water system to determine chlorine demand. From the contact chamber, water is distributed to the main distribution line, an 8" ductile iron line that feeds several residential and commercial properties before entering a partially buried 250,000 steel water tank. This tank is gravity filled and is controlled by an altitude valve that maintains a control level to keep it from overflowing. From this tank, water is distributed through a main line and feeds more residential housing before entering another 250,000-gallon concrete water storage tank. This tank provides additional storage capacity for the core area of the village. The distribution system consists of 8", 6", 4" and 2" PVC and ductile iron pipe, fittings, isolation valves and fire hydrants. All water throughout the system is fed by gravity. Adequate fire protection is provided for most of the village and the new 250,000-gallon concrete Kachina water tank was completed in 2020.

The village has 750,000 gallons of storage capacity for fire suppression throughout the village. Larger Booster pumps will be necessary in the future to fill the third water storage tank and will be added to the O & M Plan at that time.

Testing, Recordkeeping and Reporting

Routine samples from our distribution system are collected and analyzed according to the required NMED-approved Sample Siting Plan included in Appendix J.

Other testing, recordkeeping and reporting activities are conducted as follows:

Following is a list of records and reports that we keep on file for regulatory and operational purposes. Items 1 through 4 are required by the NMED-DWB; minimum time is in parentheses.

1. Monthly total coliform sample results (5 years)
2. Chemical sample results; sampling frequency may vary based on DWB requirements (10 years)
3. Lead and copper sample Results (12 years)
4. Variances (5 years after the expiration of the variance)
5. MORs, Monthly Operating Reports (5 years)
6. Quarterly chlorine residual reports (5 years)
7. Operations & control, maintenance and repair logs (3 years)
8. Copies of sanitary surveys (10 years)
9. CCRs, Consumer Confidence Reports (10 years)
10. Operator Certifications
11. All correspondence with New Mexico Environment Department Drinking Water Bureau (10 years)

Maintenance

Village operators routinely monitor water tank levels, water usage and water loss. Visual inspections are performed on equipment pumps and chlorination system. Chlorine residuals are checked daily.

In the event of a water outage or water line break, operators are instructed to first determine the cause or source of the break or outage. Once the cause or source has been identified, a plan of action will be implemented on proper procedure to address the problem. Due to the nature of every situation being unique, once an action plan has been determined, then the proper procedures will be carried out to perform the necessary repair or restoration of service.

Meter replacement programs

Water meters tend to deteriorate with age, resulting in inaccurate readings. Often meters are often damaged or do not record water use at all. Inaccurate readings result in inaccurate information about water usage which impacts system audits and leak detection efforts. Accounting for all water should be the number one priority for a utility. Implementation of meter replacement programs will not only show a decrease in apparent loss, but an increase in revenue.

The Village of Taos Ski Valley meter replacement program will replace or repair defective meters. Customer meters may need to be replaced at least once every 15 years, if not sooner. In accordance with AWWA Manual M6, the planned meter replacement program will be to replace 10 percent of the meters each year over 10 years or 20 percent per year over five years, so that all replaced meters in the system will be the more-efficient, modern design.

Emergency Preparedness and Response

Emergency Response Plan Requirements

The NMED Drinking Water Bureau (DWB) requires that all community public water systems develop and submit an ERP for DWB approval in order to ensure that systems have the ability to manage water outage or shortage situations without delays in providing safe, potable water to customers. Further, we recognize the need for a systematic response to both routine operating emergencies such as line breaks, pump malfunctions, power outages, water loss and pathogen contamination, and more serious non-routine emergencies such as chemical

spills (internal or external), drought/windstorms/ fires/flooding/other natural disasters and acts of sabotage. Each of these events can have unique effects on different system components and may threaten our system's ability to deliver safe and reliable drinking water.

A copy of our Emergency Response Plan is included in Appendix O and is incorporated as an integral component of this OMP. It is reviewed and updated on an annual basis.

NM WARN Membership Status

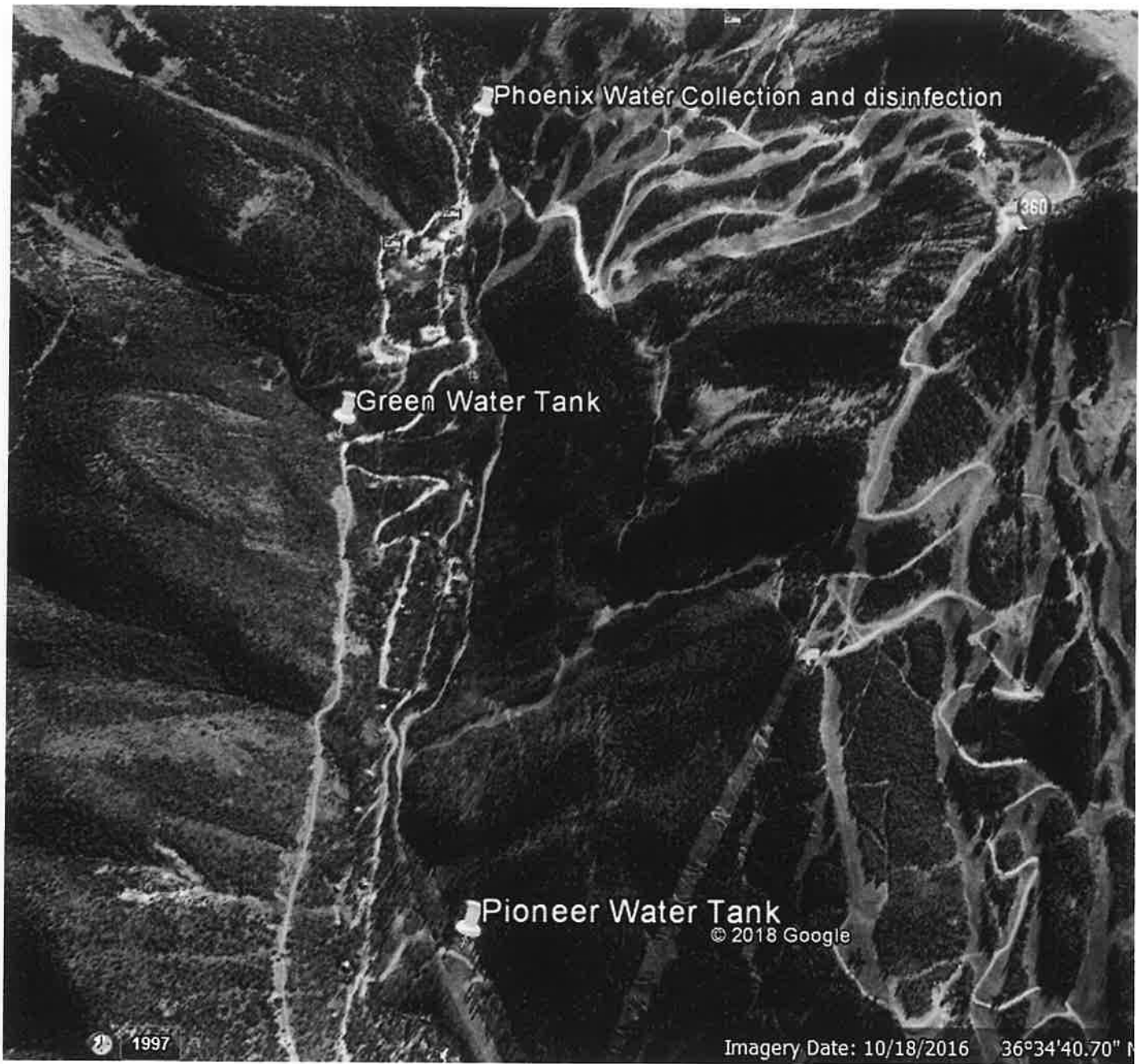
We are not members of NM WARN.

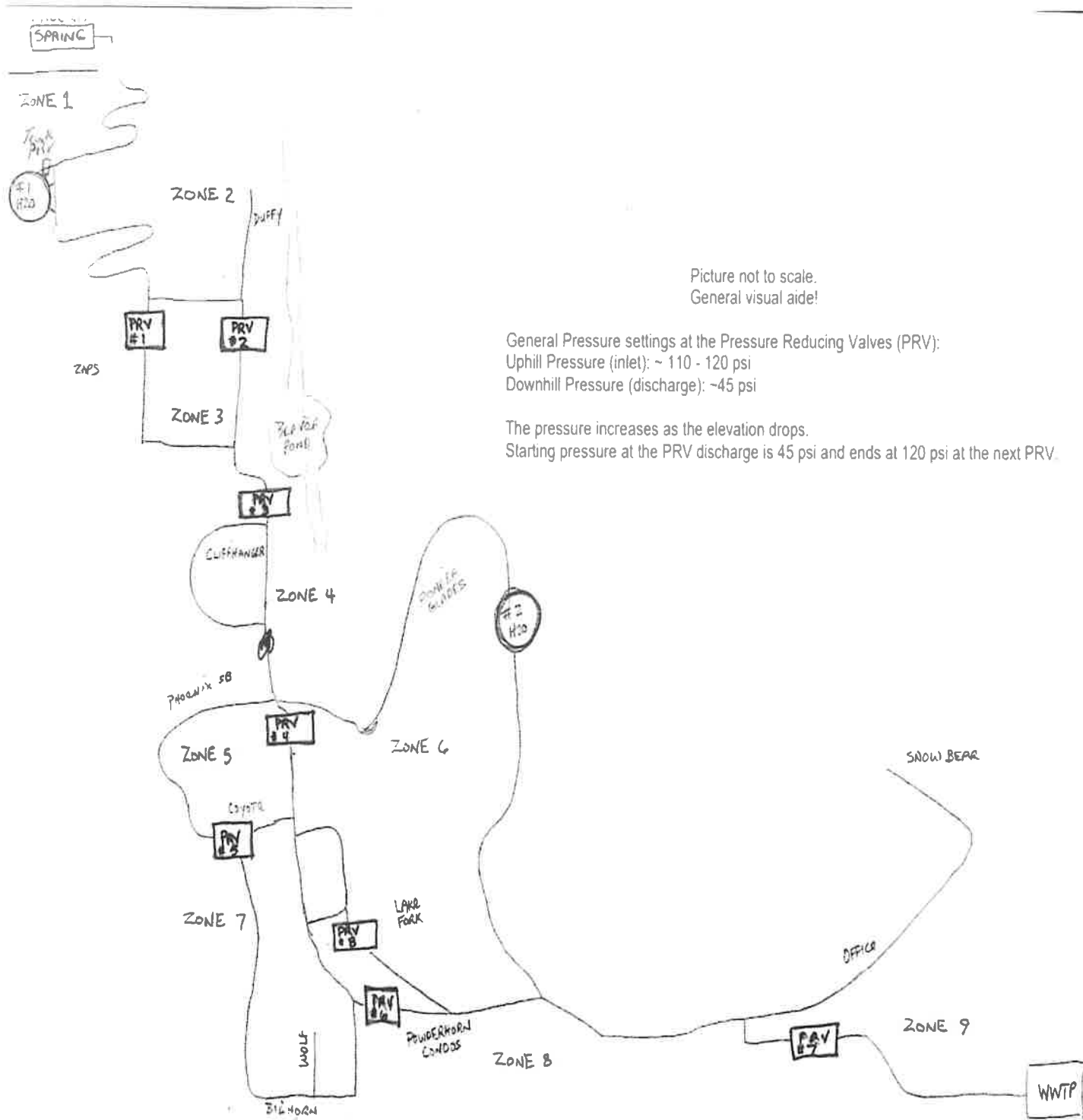
Will be working with area Mutual Domestics and other Municipalities to create a regional partnership.

Source Water/Wellhead Protection Plan

The Village of Taos Ski Valley is currently working on a Source Water Protection Plan with NMED and NMRWWA. It is a joint venture represented by residents, council members, stakeholders and municipality to preserve and protect our most valuable resource. The village hopes to have a completed the fall of 2018.

SITE MAPS

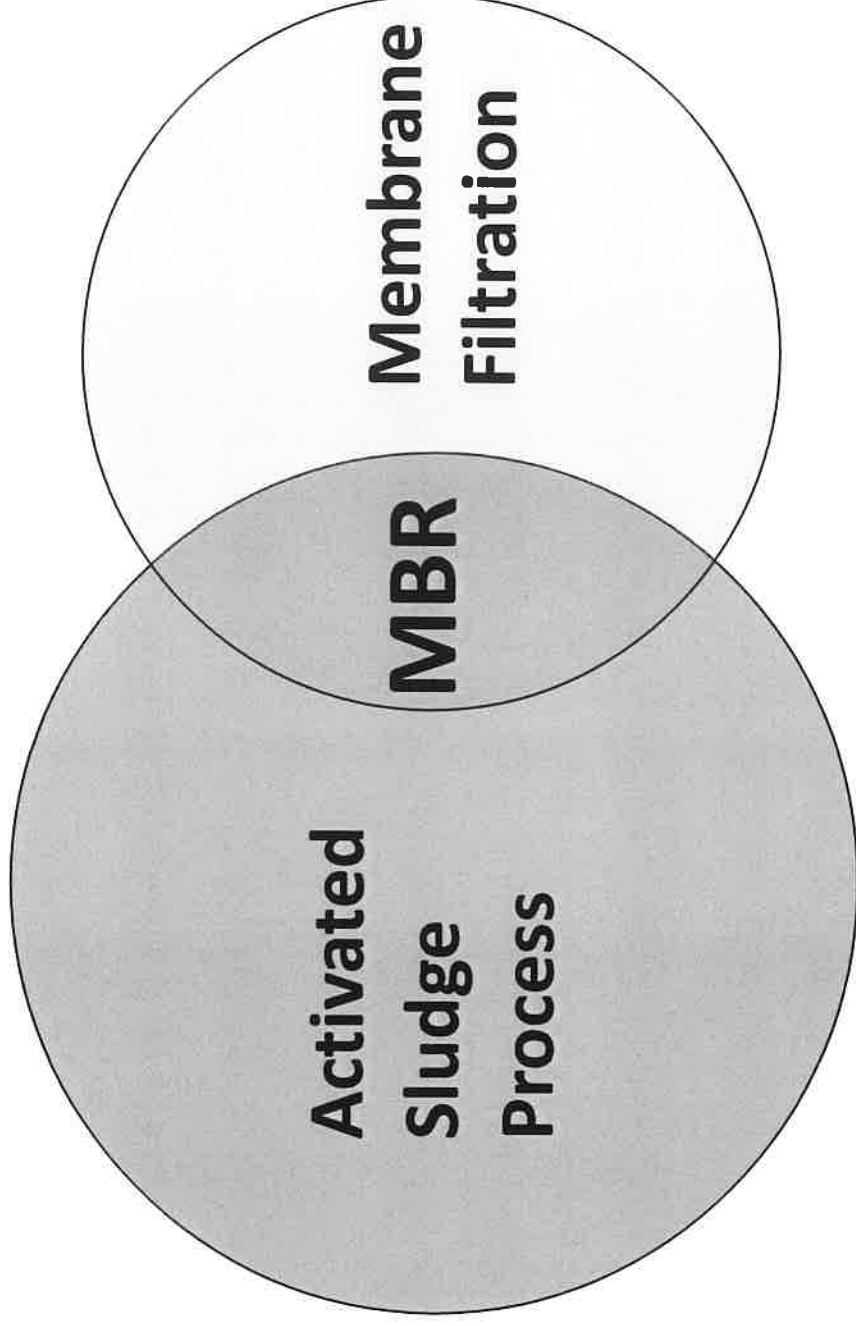




Village of Taos Ski Valley

Basics of Membrane Filtration

Membrane Bioreactor (MBR)

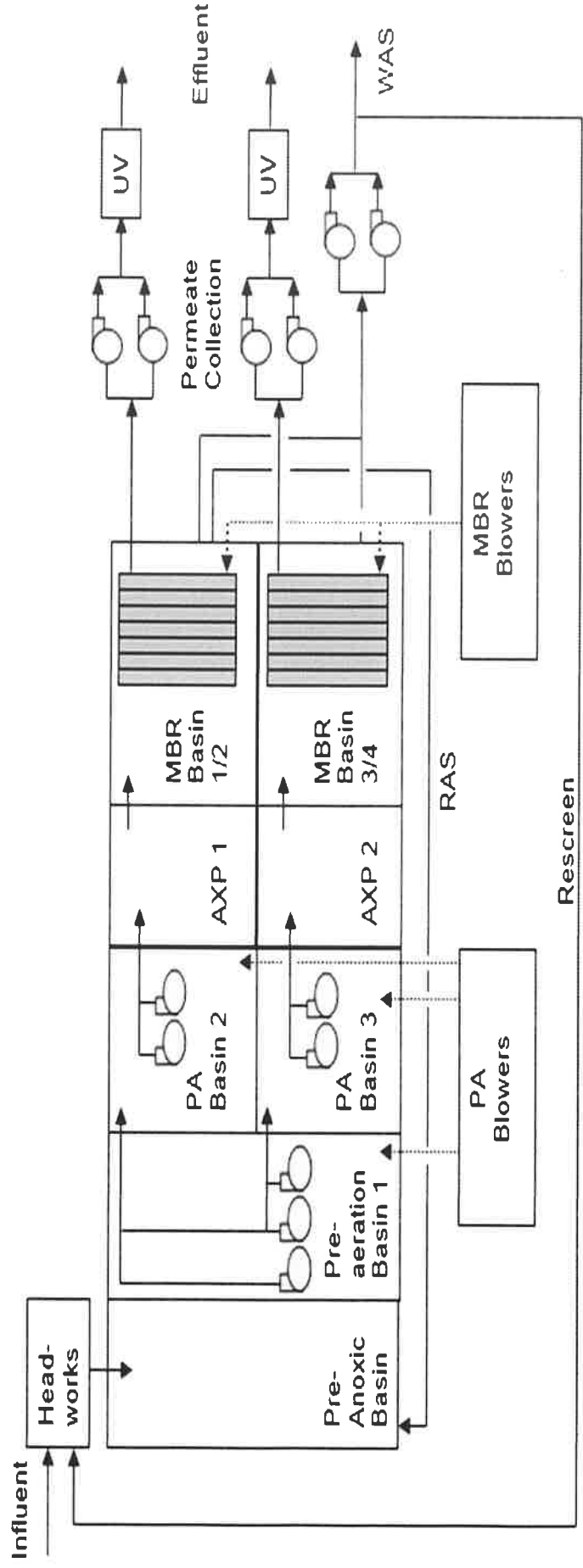
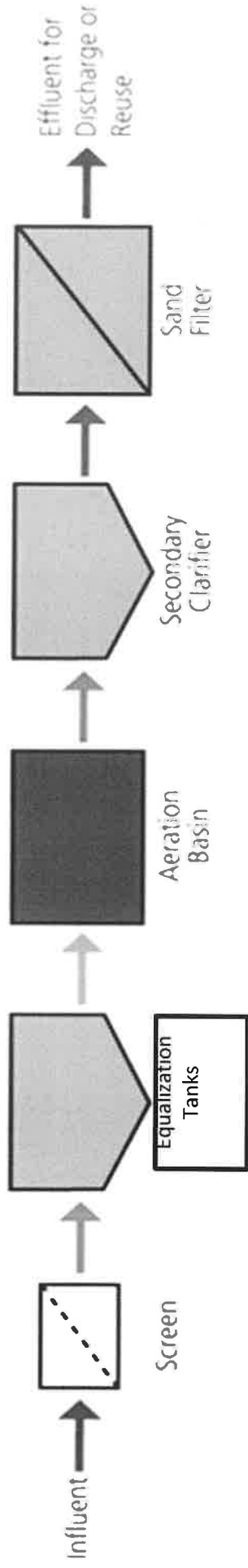


**Stable Biological
Treatment Process**

**Absolute Solids
Separation**

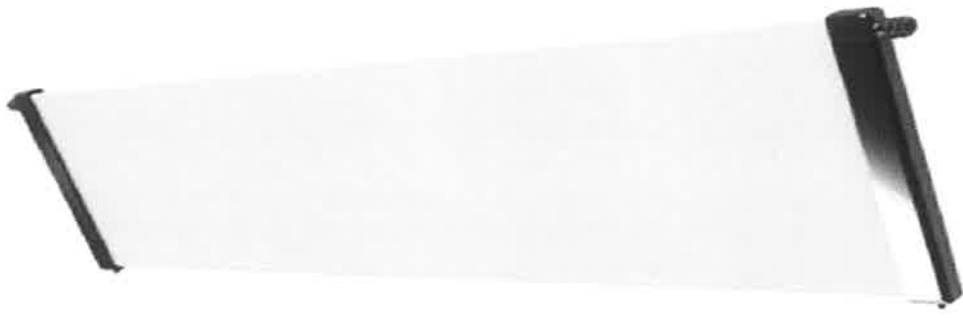
Wastewater Comparison

Conventional Multi-Step Tertiary Treatment Process



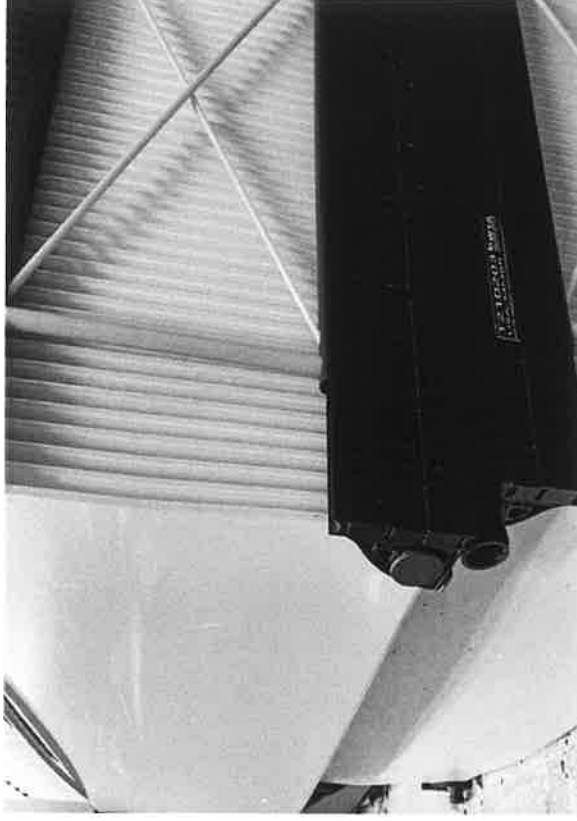
OVIVO: Membranes, Modules and Cassettes

- The pores in the membrane form a physical barrier to impurities
- Using a small amount of suction (~5 psi or 35 kPa) water is drawn through the pores
- Each module contains 40 Cembrane plates
- Each module has 65 square feet of active membrane surface

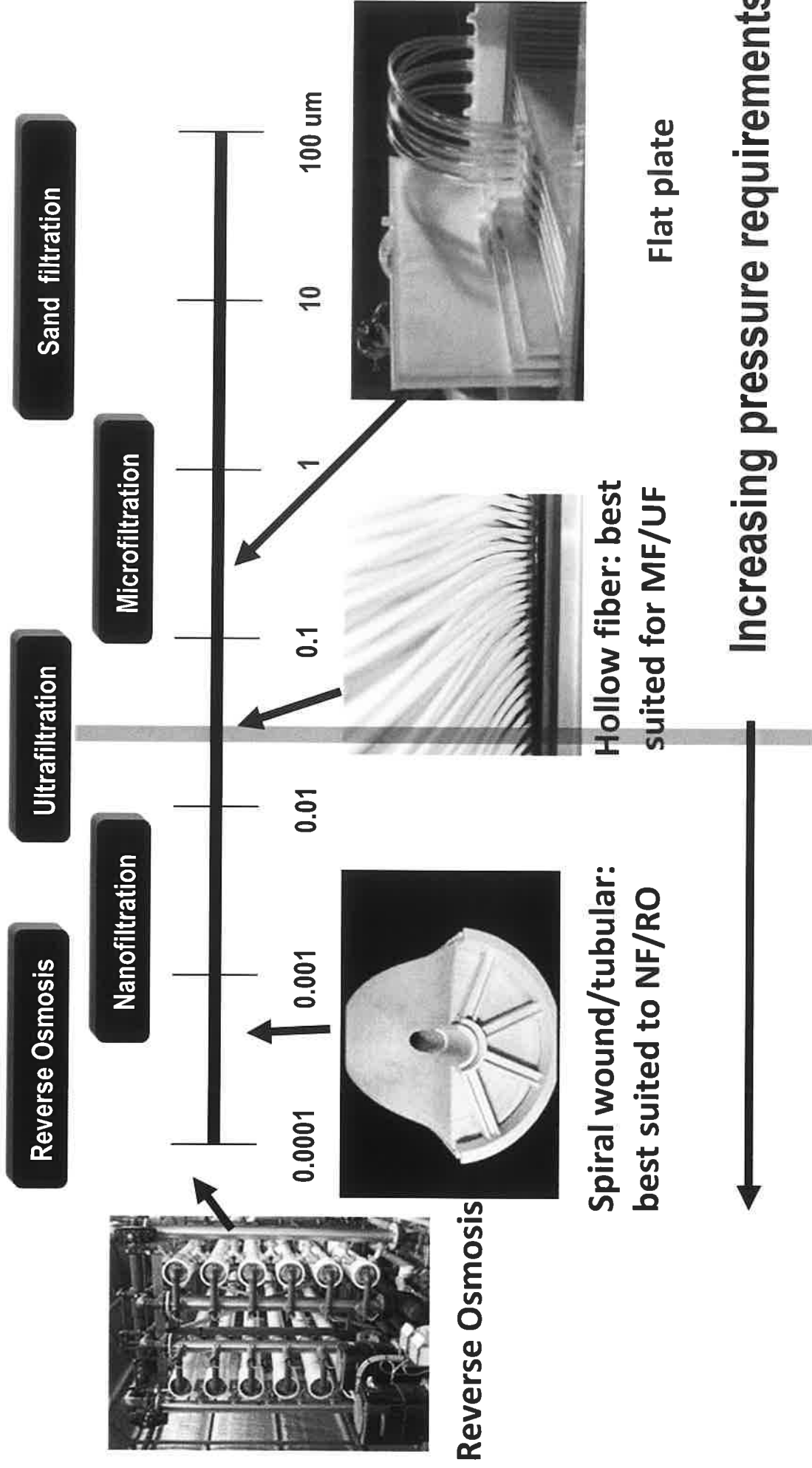


M MBR: Membrane, Modules and Cassettes

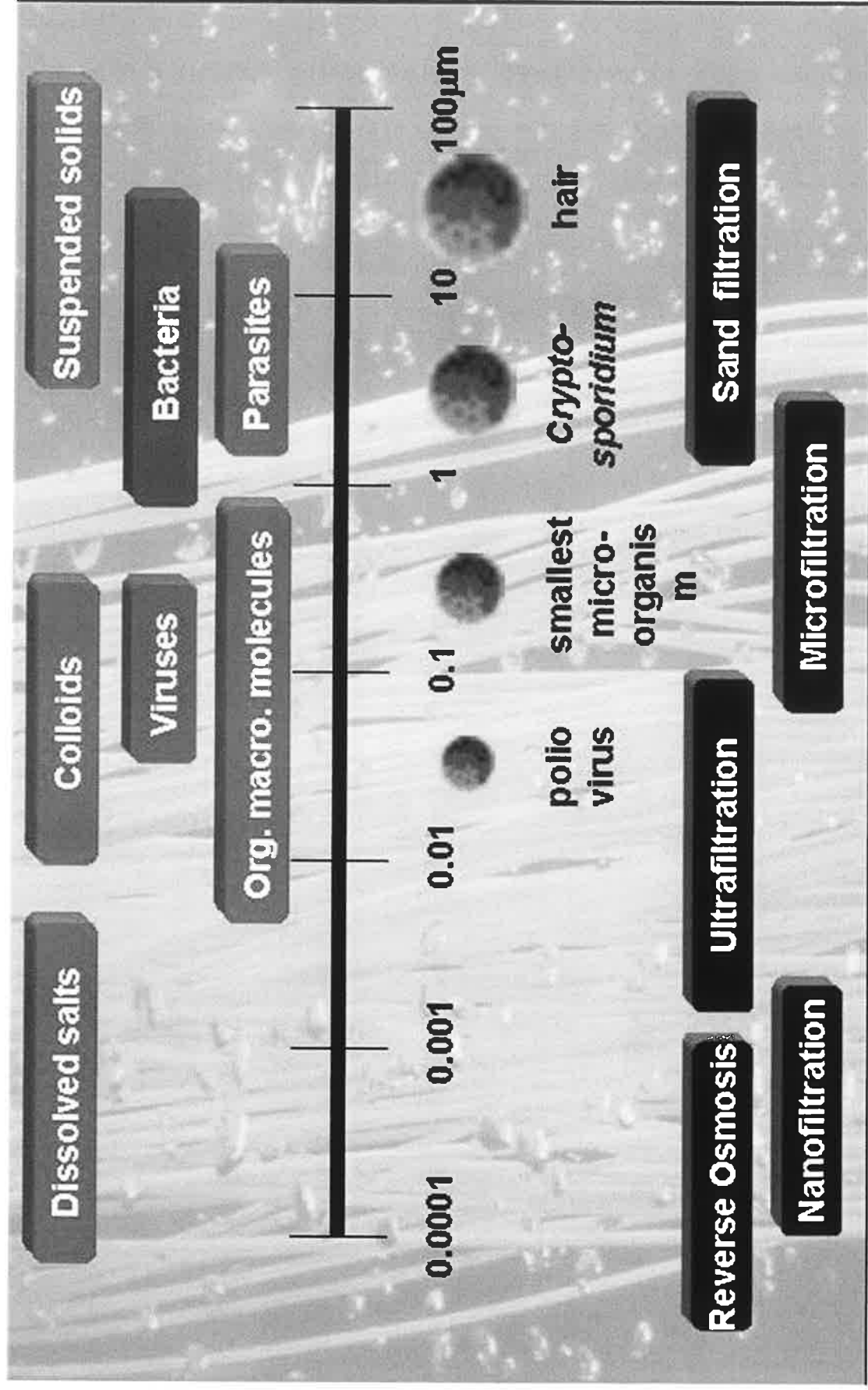
- The pores size is $0.2\ \mu$
- 3 blocks/level, 4 levels/module
- Membrane area $5,680\ \text{ft}^2$ per Membrane Unit



Membrane Pore Sizes



Filtration Spectrum

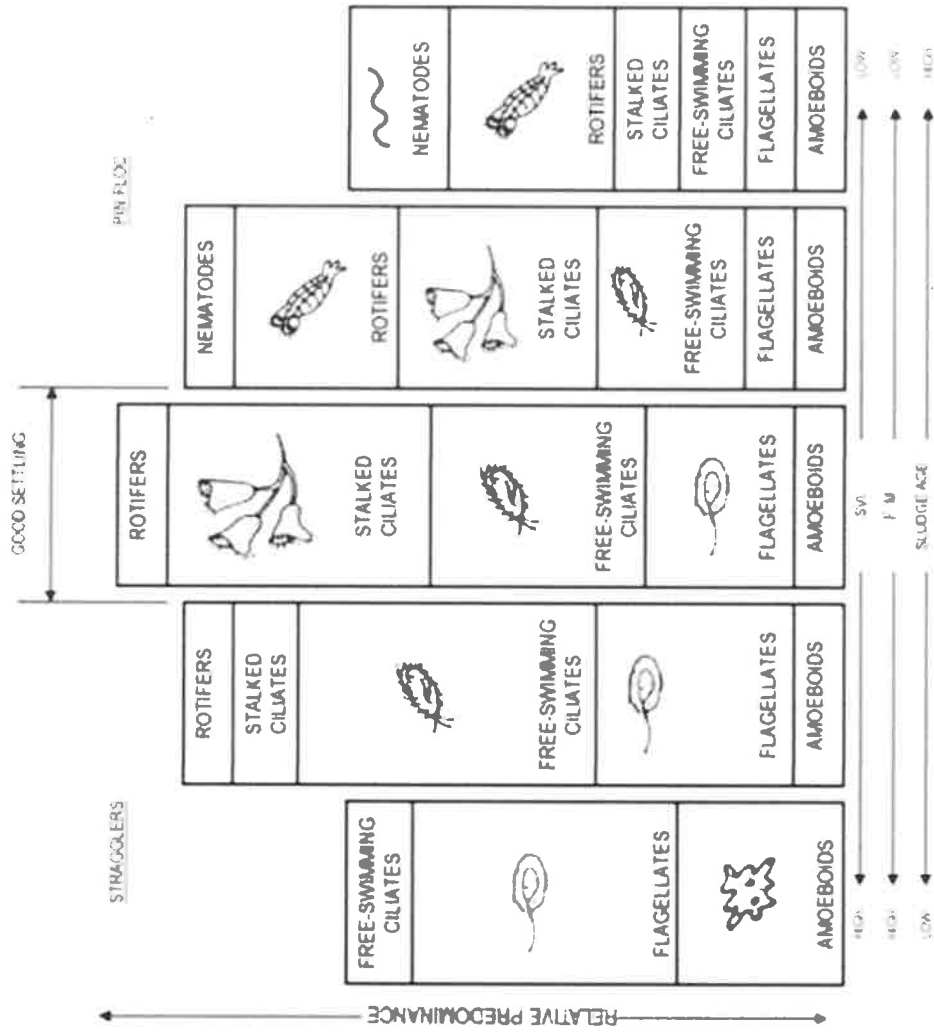


Mixed Liquor Suspended Solids:

MLSS

- Activated sludge is a biological process that utilizes microorganisms to convert organic and certain inorganic matter from wastewater into cell mass
- This food is mostly organic material. The more soluble the organic material is, the more easily microorganisms can use it.

Protozoa and Organisms in MLSS

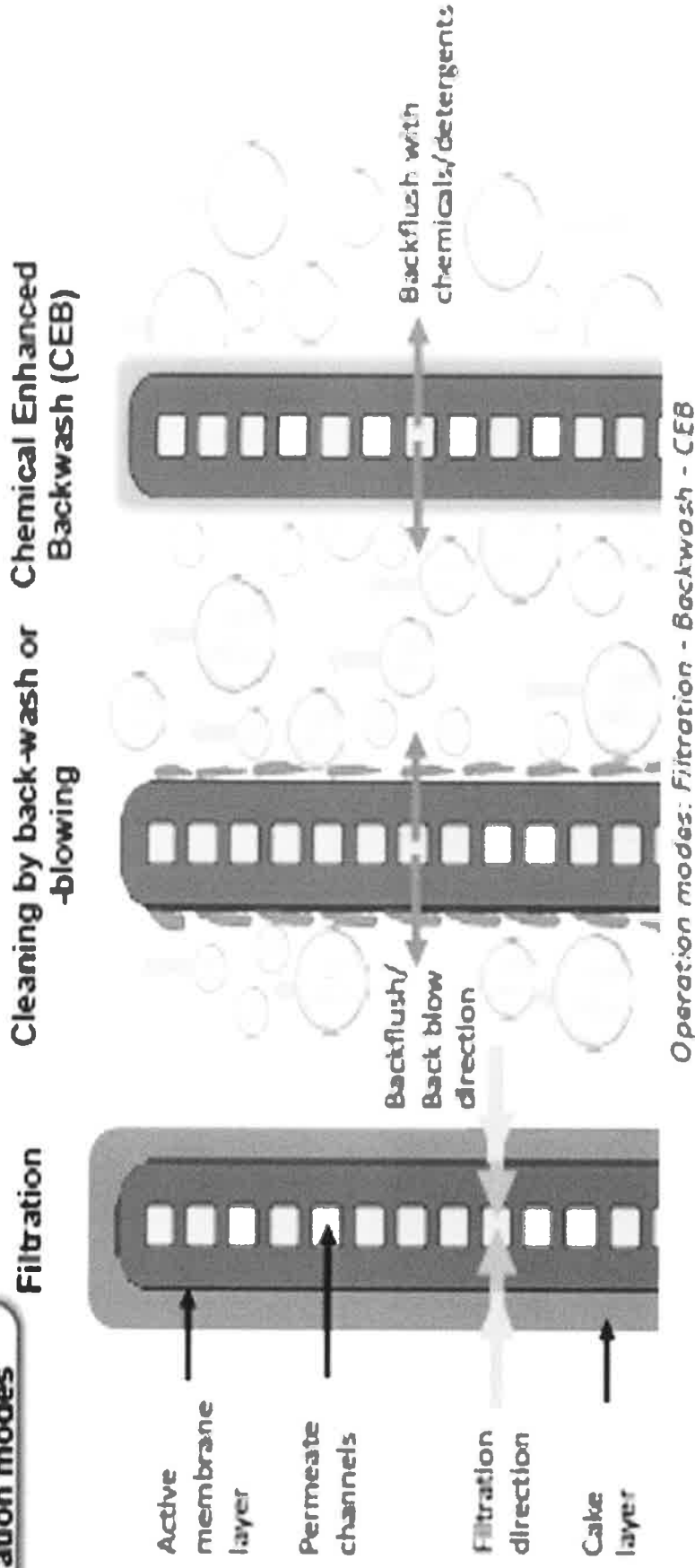


Source: CSU Sacramento, Operation of Wastewater Treatment Plants (Vol II, 6th ed.)

Review:

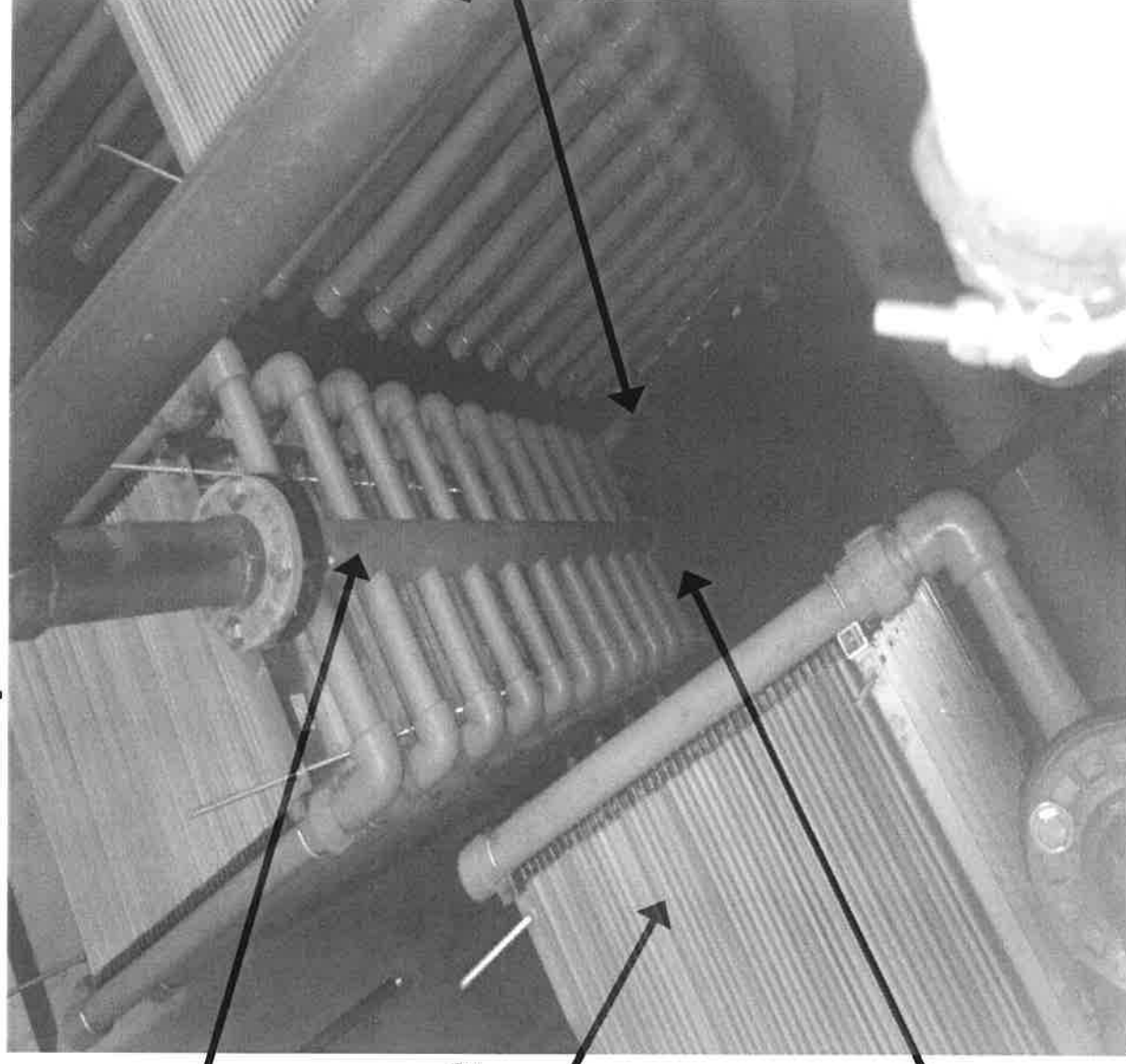
Membrane Operation

Cross section of Flat sheet membrane during different operation modes



Review: Cembrane Stack

Components



**Permeate
connection**

**Membrane
Modules**

**Aeration
Diffusers**

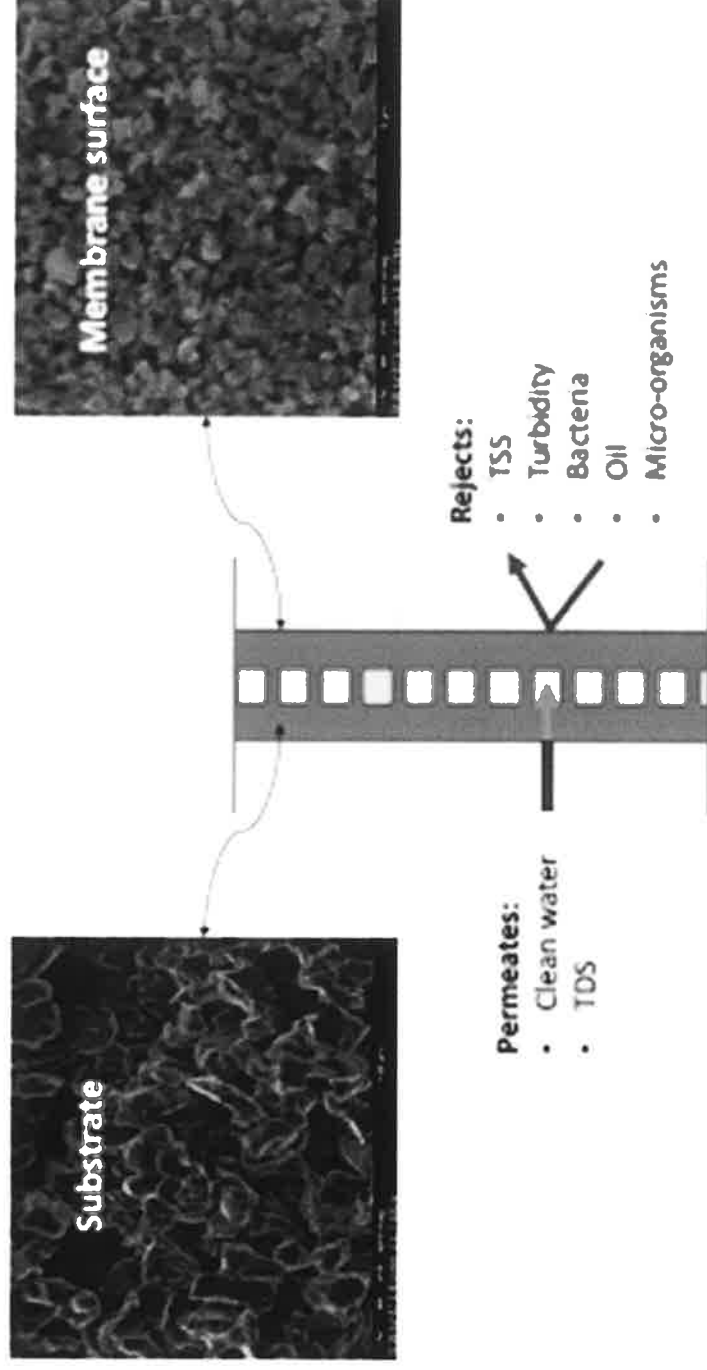
Air connection

Membrane Properties

Membrane properties

Design

The pore size of the membrane is in the MF/UF range (0,1 μm) with an asymmetric design as illustrated below.



Permit

NPDES PERMIT No. NM0022101

Page 1 of PART I

PART I – REQUIREMENTS FOR NPDES PERMITS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. Effluent Limits – 0.167 MGD Design Flow

Beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated municipal wastewater to the Rio Hondo, in Segment Number 20.6.4.129, from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS	
		Standard Units			MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM			
pH	00400	6.6	8.8		Five/week	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS	
		lbs/day, unless noted		mg/L, unless noted (*1)			MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	STORET CODE	30-DAY AVG	DAILY MAX	DAILY AVG	DAILY MAX	7-DAY AVG		
Flow	50050	Report MGD	Report MGD	Report MGD	N/A	N/A	Daily	Totalizing Meter
Biochemical Oxygen Demand, 5-day November 1 - April 30 May 1 - October 31	00310	23.8 23.8	N/A N/A	35.7 35.7	N/A N/A	45 45	Twice/Month (*2) Once/Month	Grab Grab
Total Suspended Solids November 1 - April 30 May 1 - October 31	00530	23.8 23.8	N/A N/A	35.7 35.7	N/A N/A	45 45	Twice/Month (*2) Once/Month	Grab Grab
Biochemical Oxygen Demand, 5-day, minimum % removal	≥85%	N/A	N/A	N/A	N/A	N/A	Once/Month	Calculation (*8)
Total Suspended Solids minimum % removal	≥85%	N/A	N/A	N/A	N/A	N/A	Once/Month	Calculation (*8)
E. coli Bacteria	51040	N/A	N/A	N/A	126 (*3)	235 (*3)	Twice/Month (*2)	Grab

Permit cont'd

NPDES PERMIT No. NM0022101

Page 2 of PART I

Fecal Coliform Bacteria	74055	N/A	N/A	N/A	N/A	200 (*3)	400 (*3)	N/A	Twice/Month (*2)	Grab
Total Residual Chlorine	50060	N/A	N/A	N/A	N/A	N/A	19 µg/l	N/A	Five/Week	Instantaneous Grab (*4)
Ammonia-Nitrogen November 1 - April 30 May 1 - October 31	00610	5.34 5.34	N/A N/A	5.34 5.34	3.2 3.2	N/A N/A	N/A N/A	3.2 3.2	Twice/Month (*2) Once/Month	6-Hour Composite 6-Hour Composite
Total Nitrogen (*5) November 1 - April 30 May 1 - June 30 July 1 - August 31 September 1 - October 31	00600	13.65 46.55 27.7 21.1	N/A N/A N/A N/A	20.5 68.8 41.6 31.7	8.2 27.9 16.6 12.7	N/A N/A N/A N/A	N/A N/A N/A N/A	12.3 4.2 24.9 19	Once/Week Once/Month Once/Month Once/Month	6-Hour Composite 6-Hour Composite 6-Hour Composite 6-Hour Composite
Total Phosphorus November 1 - April 30 May 1 - June 30 July 1 - August 31 September 1 - October 31	00665	0.8 1.6 1.2 0.8	N/A N/A N/A N/A	1.2 2.4 1.8 1.2	0.5 1.0 1.5 2.5	N/A N/A N/A N/A	N/A N/A N/A N/A	0.75 1.5 2.25 3.75	Twice/Month (*2) Once/Month Once/Month Once/Month	6-Hour Composite 6-Hour Composite 6-Hour Composite 6-Hour Composite

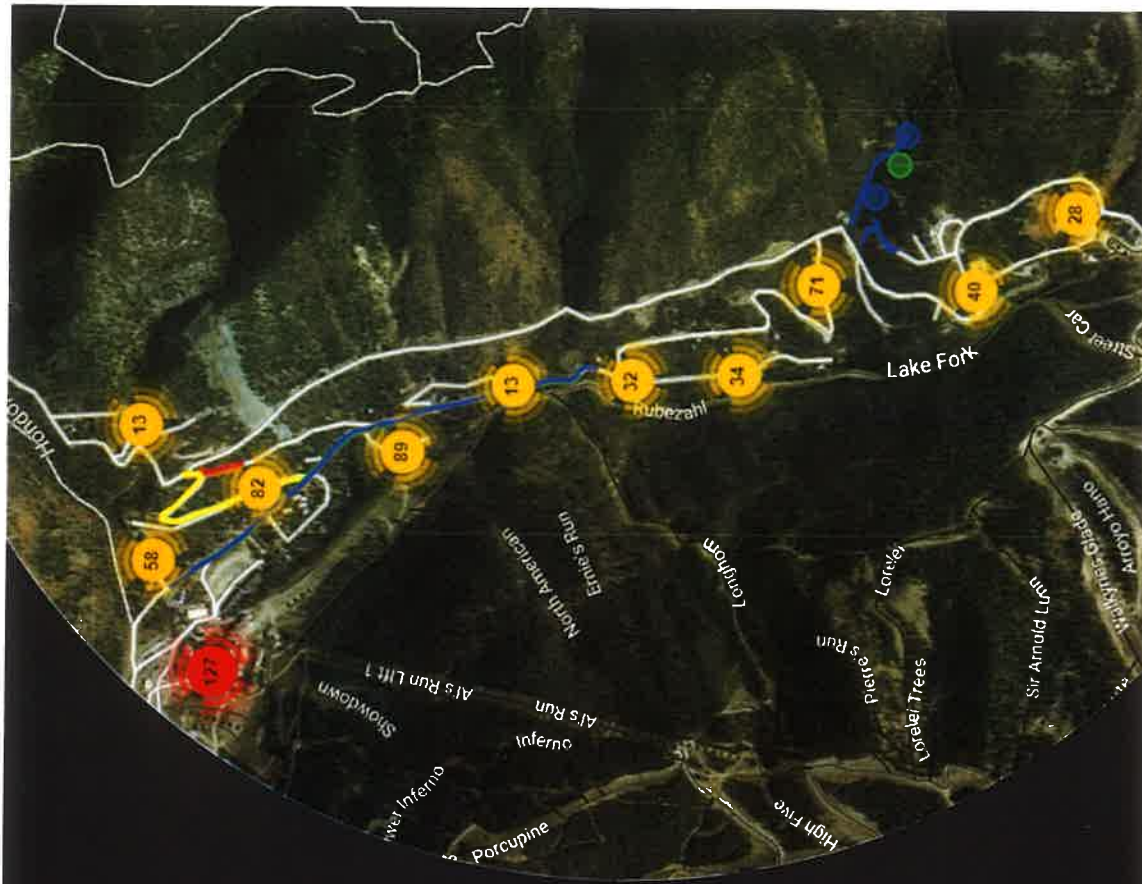
EFFLUENT CHARACTERISTICS		DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY TESTING (*6) (48-Hour Static Renewal)		30-DAY AVG MINIMUM	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Daphnia pulex</i>		Report	Report	1/12 months (*7)	24-Hr Composite
<i>Pimephales promelas</i>		Report	Report	1/12 months (*7)	24-Hr Composite

Footnotes:

- *1 See Appendix A of Part II of the permit for the required Minimum Quantification Level (MQL).
- *2 Sampling at least ten days apart.
- *3 Colony forming units (cfu) per 100 ml or most probable number (MPN).
- *4 The effluent limitation for TRC is the instantaneous maximum grab sample taken during periods of chlorine use and can not be averaged for reporting purposes. Instantaneous maximum: is defined in 40 CFR Part 136 as being measured within 15 minutes of sampling.
- *5 Total Nitrogen is defined as the sum of Total Kjeldahl Nitrogen (as N) and Nitrate-Nitrate (as N). See EPA Methods 351 and 353.
- *6 Monitoring and reporting requirements begin on the effective date of this permit. See PART II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.
- *7 The discharge shall be tested between November 1 and April 30.
- *8 Percent removal is calculated using the following equation:

$$[\text{average monthly influent concentration (mg/l)} - \text{average monthly effluent concentration (mg/l)}] \div [\text{average monthly influent concentration (mg/l)}] \times 100.$$

TAOS SKI VALLEY POINT MAN PROJECT



POINT MAN
SOFTWARE

TRIMBLE

LINE LOCATOR



TYPES OF DATA COLLECTED



Classifications of Data

Comment	
Component	Manhole
Created By	rwooldridge@vtsv.org
Date Created	June 15th, 2023, 02:03 PM
Date Modified	June 15th, 2023, 02:03 PM
Dictionary	SkiTaos Dictionary
Modified By	rwooldridge@vtsv.org
Notes	
System	Sanitary Sewer

10:15 AM 100% **ProTacsSkValley** **Now**

Water Hydrant

Properties

Type: Water Hydrant
 Comment: 100%_100%_100%_100%
 Photos: 2/2
 Details: 2/2

ProTacs

Version: PM 6.210 B54
 Created: 6/24/2012 2:25 PM
 User: mrold@prologs.org
 Device: iPhone4,6 - 605.16.5
 Next Type: Trouble D22
 GPS Data: 6/24/2012
 GPS Time: 02:26 PM
 Accuracy: 1.9835 m

Send **Edit** **Close**

10:15 AM 100% **ProTacsSkValley** **Now**

Water Hydrant

Send

GPS Time: 02:26 PM
 Accuracy: 1.9835 m
 Altitude: 9336.3957 ft
 Horizontal: 9328.9745 ft
 Vertical: 1.6081 m
 Speed: 7.011
 Status: 33
 Fix Type: RTK
 DOP: 12
 Antenna: 74012 N
 Latitude: 36.59227953
 Longitude: -105.44393488
 Altitude: 9336.3957 ft
 Horizontal: 9328.9745 ft
 Vertical: 1.6081 m

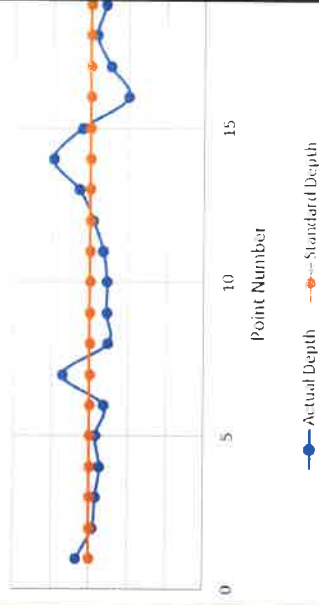
Edit **Close**

Hydrant ID	100%_100%_100%_100%
Location	Hydrant North Street Road
Location Description	Hydrant Wall
Latitude	36.59227953
Longitude	-105.44393488
Elevation	9328.9745
Pressure Zone	9328.9745
Service Status	Active
Hydrant Color	Yellow
Collar	Yes
Collar Color	Yellow
Manufacturer	Waterman
Year	1995
Main Valve Size	5"
Working Pressure	150
Last Flow Test	
Tested By	
Condition	
Criticality	
Level of Service	
Data Entry Date	6/24/2012
Comments	

POINT DATA AND INFORMATION

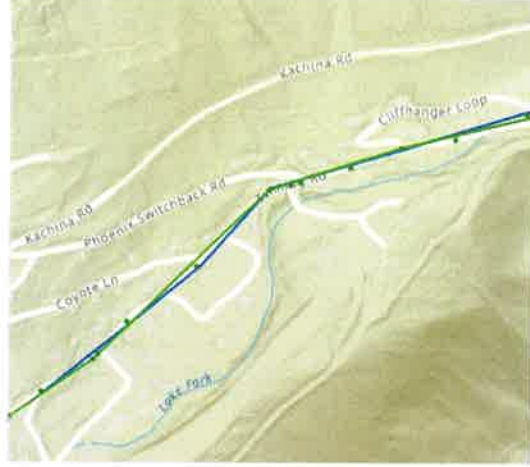


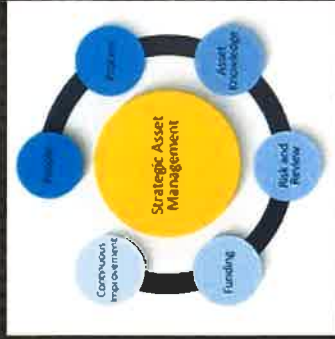
Depth of Gas Line Pheonix vs. Standard



LINE LOCATION

WALKED LINES





FUTURE IMPLEMENTATIONS AND APPLICATIONS

POINT MAN FOR NEAR BY MUNICIPALITIES

SERVICE PLAN A

- USING OUR VIEWER LICENSE

SERVICE PLAN B

- PURCHASING YOUR OWN
VIEWER LICENSE

SERVICE PLAN C

- FULLY PURCHASING YOUR OWN
SYSTEM

INFORMATION GAINED THROUGH POINTMAN

GIS DATA

- DATA FROM POINT MAN CAN BE UPLOADED TO GIS OR OTHER SATELLITE IMAGERY SOFTWARE

POINT MAN DATA BASE

- POINT MAN ITSELF HAS A DIGITAL MAP THAT CAN DISPLAY INFORMATION COLLECTED

DISCUSSION OF OPTIONS AND HOW WE CAN ASSIST

DIFFERENT LEVELS OF ASSISTANCE

QUESTIONS

